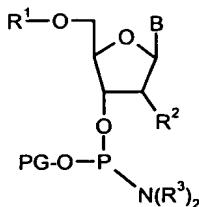


CLAIMS

1. A process for the purification of an oligonucleotide synthon, which comprises subjecting an organic solution comprising an oligonucleotide synthon and lower molecular weight impurities to nanofiltration whereby the ratio of an oligonucleotide synthon to lower molecular weight impurities in the solution is increased after the nanofiltration.

5 2. A process according to claim 1, wherein the oligonucleotide synthon is a nucleoside phosphoramidite or nucleoside H-phosphonate.

10 3. A process according to claim 2, wherein the oligonucleotide synthon is a compound of formula (1):



15 5. wherein R^1 is a protecting group, B is a nucleoside base, R^2 represents $-\text{H}$, $-\text{F}$ $-\text{OR}^4$, $-\text{NR}^5\text{R}^6$, $-\text{SR}^7$, or a substituted or unsubstantiated aliphatic group, each R^3 independently is a C_{1-6} alkyl group, PG is a phosphorus protecting group, R^4 represents $-\text{H}$, a substituted or unsubstantiated aliphatic group, a substituted or unsubstantiated aryl group, a substituted or unsubstantiated aralkyl, an alcohol protecting group, or $-(\text{CH}_2)_q\text{NR}^9\text{R}^{10}$, R^5 and R^6 are each, independently, $-\text{H}$, a substituted or unsubstantiated aliphatic group, or an amine protecting group, or R^5 and R^6 taken together with the nitrogen to which they are attached are a heterocycl group, R^7 represents $-\text{H}$, a substituted or unsubstantiated aliphatic group, or a thiol protecting group, R^9 and R^{10} are each, independently, $-\text{H}$, a substituted or unsubstantiated aryl group, a substituted or unsubstantiated heteroaryl group, a substituted or unsubstantiated aliphatic group, a substituted or unsubstantiated aralkyl group, a substituted or unsubstantiated heteroaralkyl group or an amine protecting group, or R^9 and R^{10} taken together with the nitrogen to which they are attached form a heterocycl group; and q is an integer from 1 to about 6.

20 6. A process according to claim 5, wherein R^1 is a substituted or unsubstantiated aliphatic group, a substituted or unsubstantiated aryl group, a substituted or unsubstantiated heteroaryl group, a substituted or unsubstantiated aliphatic group, a substituted or unsubstantiated aralkyl group, a substituted or unsubstantiated heteroaralkyl group or an amine protecting group, or R^1 and R^2 taken together with the nitrogen to which they are attached form a heterocycl group; and q is an integer from 1 to about 6.

25 7. A process according to claim 5, wherein R^1 is a substituted or unsubstantiated aliphatic group, a substituted or unsubstantiated aryl group, a substituted or unsubstantiated heteroaryl group, a substituted or unsubstantiated aliphatic group, a substituted or unsubstantiated aralkyl group, a substituted or unsubstantiated heteroaralkyl group or an amine protecting group, or R^1 and R^2 taken together with the nitrogen to which they are attached form a heterocycl group; and q is an integer from 1 to about 6.

30 8. A process according to claim 5, wherein R^1 is a substituted or unsubstantiated aliphatic group, a substituted or unsubstantiated aryl group, a substituted or unsubstantiated heteroaryl group, a substituted or unsubstantiated aliphatic group, a substituted or unsubstantiated aralkyl group, a substituted or unsubstantiated heteroaralkyl group or an amine protecting group, or R^1 and R^2 taken together with the nitrogen to which they are attached form a heterocycl group; and q is an integer from 1 to about 6.

9. A process according to any preceding claim, wherein a polyimide nanofiltration membrane is employed.

6. A process according to any preceding claim, wherein a nanofiltration membrane having a molecular weight cut off of 400 is employed.
7. A process according to any preceding claim, wherein the process is operated in cross flow configuration.
8. A process according to any preceding claim, wherein the process employs a pressure of from 15 to 35 bar.
9. A process according to any preceding claim, wherein fresh organic solvent corresponding to the volume passed through the nanofiltration membrane is added into the retained synthon solution.